

CITY OF HOUSTON



**PUBLIC WORKS AND
ENGINEERING**
PLANNING & DEVELOPMENT
DIVISION

Application for Approval of Municipal Setting Designation

APPLICANT INFORMATION

Applicant's Name: InSite West Belt, L.P.

☐ Individual ☒ Private Entity ☐ Public Entity ☐ Non-Profit Entity ☐ Other _____

Address: 2401 Fountainview, Suite 510 Houston Texas 77057
(Street) (City) (State) (Zip)

Phone No.: 713-339-5338 Fax No.: 713-339-1313

Email: kvannorman@insiterealty.com

Contact Information

Name of Contact: Michael F. Marcon (InControl Technologies)

Title: President

Address: 38/45 FM 1960 W, Suite 195 Houston Texas 77068
(Street) (City) (State) (Zip)

Phone No.: 281-580-8892 Fax No.: 281-580-8853

Email: mmarcon@incontroltech.com

SITE INFORMATION

Site Name: West Belt Business Park

Site Size: 14.6 acres

Site Address: 10651 Harwin Drive, Houston, Harris County, Texas 77036

(List all owners – additional sheet is attached, if needed)

Owner: InSite West Belt, L.P.

Owner Address: 2401 Fountainview, Suite 510 Houston Texas 77057
(Street) (City) (State) (Zip)

Name of Contact: Kris Van Norman

Title: Vice President

Organization: InSite West Belt, L.P.

Phone No.: 713-339-5338 Fax No.: 713-339-1313

Email: kvannorman@insiterealty.com

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#2008-006-WBBP

Additional Owner List

(Cont'd from pg. 1)

Owner: _____

Owner Address: _____
(Street) (City) (State) (Zip)

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

Owner Address: _____
(Street) (City) (State) (Zip)

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

Owner Address: _____
(Street) (City) (State) (Zip)

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

Owner Address: _____
(Street) (City) (State) (Zip)

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Municipal Setting Designation Application

**West Belt Business Park
10651 Harwin Drive
Houston, Harris County, Texas 77036**



City of Houston

Public Works and Engineering

Planning and Development Division

Prepared for:

**InSite West Belt L.P.
2401 Fountainview, Suite 510
Houston, Texas 77057**



January 28, 2008

Prepared by:

InControl Technologies, Inc.

3845 FM 1960 West, Suite 195
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853



ITEM	YES	NO	N/A	COH Use Only
**Executive Summary (Use Sheet Attached)	√			
1. Provide a legal description of the boundaries of the designated property and a copy of the deed for the designated property. <u>Label "Appendix A" - Cross Reference with TCEQ's # 3</u>	√			
2. A site map showing: a. The location of the designated property. b. The topography of the designated property as indicated on publicly available sources, which must note the watershed and whether the designated property is located in a floodplain or floodway, as those terms are defined in Chapter 19 of the Code. c. The detected area of groundwater contamination. d. The location of all soil sampling locations and all groundwater monitoring wells. e. Groundwater gradients, to the extent known, and direction of groundwater flow. f. The ingestion protective concentration level exceedence zone for each contaminant of concern, to the extent known. <u>Label "Appendix B" - Cross Reference with TCEQ's # 1, 2 & 4</u>	√			
3. A description of the current use, and, to the extent known, the anticipated uses, of the designated property and properties within 500 feet of the boundary of the designated property. <u>Label "Appendix C"</u>	√			
4. For each contaminant of concern within the ingestion protective concentration level exceedence zone, to the extent known, provide the following: a. A description of the ingestion protective concentration level exceedence zone and the non-ingestion protective concentration level exceedence zone, including a specification of the horizontal area and the minimum and maximum depth below ground surface. b. The level of contamination, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/L units. c. Its basic geochemical properties (e.g., whether the contaminant of concern migrates with groundwater, floats or is soluble in water). <u>Label "Appendix D" - Cross Reference with TCEQ's # 5</u>	√			
5. For each contaminant of concern within the designated groundwater, to the extent known: a. A description of the ingestion protective concentration level exceedence zone and the non-ingestion protective concentration level exceedence zone, including a specification of the horizontal area and the minimum and maximum depth below ground surface. b. The level of contamination, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/L units. c. Its basic geochemical properties (e.g., whether the contaminant of concern migrates with groundwater, floats or is soluble in water). <u>Label "Appendix E" - Cross Reference with TCEQ's # 5</u>	√			

ITEM	YES	NO	N/A	COH Use Only
<p>6. A table displaying the following information for each contaminant of concern, to the extent known:</p> <p>a. The maximum concentration level for soil and groundwater, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/L units.</p> <p>b. The critical protective concentration level without the municipal setting designation, highlighting any exceedences.</p> <p><u>Label "Appendix F" - Cross Reference with TCEQ's # 5</u></p>	√			
<p>7. A statement as to whether the plume of contamination is stable, expanding, or contracting, with the basis for that statement. If this information is not known, a statement of why the information is not known should be attached.</p> <p><u>Label "Appendix G"</u></p>	√			
<p>8. A statement as to whether contamination on and off the designated property without a municipal setting designation <u>exceeds</u> a residential assessment level as defined in the Texas Risk Reduction Program or analogous residential level set by EPA, if known, and the basis for that statement.</p> <p><u>Label "Appendix H"</u></p>	√			
<p>9. A statement as to whether contamination on and off the designated property with a municipal setting designation <u>will exceed</u> a residential assessment level as defined in the Texas Risk Reduction Program or analogous residential level set by EPA, if known, and the basis for that statement.</p> <p><u>Label "Appendix I"</u></p>	√			
<p>10. Identification of the points of origin of the contamination and the persons responsible for the contamination, to the extent known.</p> <p><u>Label "Appendix J"</u></p>	√			
<p>11. A description of any environmental regulatory actions that have been taken within the past five years in connection with the designated property, to the extent known.</p> <p><u>Label "Appendix K"</u></p>			√	
<p>12. A listing of all existing state or EPA registrations, permits, and identification numbers that applies to the designated property.</p> <p><u>Label "Appendix L"</u></p>	√			
<p>13. A statement as to whether the designated property has been admitted to the Texas Voluntary Cleanup Program (section 361.601 of the Texas Health & Safety Code, as may be amended from time to time) or similar state or federal programs, and a description of the status of the designated property in the program.</p> <p><u>Label "Appendix M"</u></p>	√			

ITEM	YES	NO	N/A	COH Use Only
14. A summary of any environmental site assessment reports filed with TCEQ regarding any site investigations or response actions that are planned, ongoing or completed related to the designated property. <u>Label "Appendix N"</u>	√			
15. A statement as to whether any public drinking water supply system exists that satisfies the requirements of Chapter 341 of the Texas Health and Safety Code and that supplies or is capable of supplying drinking water to the designated property and property within one-half mile of the designated property and the identity of each supply system. <u>Label "Appendix O" - Cross Reference with TCEQ's # 2. 1st bullet</u>	√			
16. The name and address of each owner or operator of a water well registered or permitted by the state or the Houston-Galveston Subsidence District that is located within five miles of the boundary of the designated property, along with: a. A map showing the location of each well and, to the extent known, a notation of whether each well is used for potable water. b. A statement as to whether the applicant has provided notice to each owner in compliance with section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix P" - Cross Reference with TCEQ's # 8 & 9</u>	√			
17. The name and address of each retail public utility, as defined in section 13.002 of the Texas Water Code, that owns or operates a groundwater supply well within five miles of the boundary of the designated property, along with a statement as to whether the applicant has provided notice as required by section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix Q" - Cross Reference with TCEQ's # 7, 3rd bullet</u>	√			
18. A listing of each municipality, other than the city of Houston, with a corporate limit within one-half mile of the boundary of the designated property, and a statement as to whether the applicant has provided notice as required by section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix R" - Cross Reference with TCEQ's # 7, 2nd bullet</u>	√			
19. A listing of each municipality, other than the city of Houston, that owns or operates a groundwater supply well within five miles of the boundary of the designated property, and a statement as to whether the applicant has provided notice as required by section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix S" - Cross Reference with TCEQ's # 7, 4th bullet</u>	√			
20. A listing of owners of real property within 2,500 ft. of the boundary of the designated property as indicated by the most recent appraisal district records. (Include pre-printed mailing labels) <u>Label "Appendix T"</u>	√			

ITEM	YES	NO	N/A	COH Use Only
<p>21. The following statement signed and sealed by a licensed professional engineer or licensed professional geoscientist authorized to practice in the State of Texas with expertise in environmental remediation:</p> <p>'To the best of my knowledge and belief, based upon a review of all public and private records and other information sources available to me in the exercise of due diligence, the opinions stated and conclusions made in this application are supported by such information, and the technical and scientific information submitted with the application is true, accurate and complete. Based on such review, the contaminants of concern from sources on the designated property or migrating from or through the designated property more likely than not do exceed or do not exceed a non-ingestion protective concentration level on property beyond the boundaries of the designated property'</p> <p><u>Label "Appendix U"</u></p>	√			
<p>22. If the licensed professional engineer or licensed professional geoscientist determines that contaminants of concern from sources on the designated property are migrating from or through the designated property more likely than not do exceed a non-ingestion protective concentration level on property beyond the boundary of the designated property, then the applicant must:</p> <ol style="list-style-type: none"> Specify the name and address of the owner of each property. Send a copy of the application to the owner of the property with the notice of the public meeting. Provide documentation that the designated property has been included in a state or federal program that requires that the entire non-ingestion protective concentration level exceedance zone be addressed to the satisfaction of the agency administering the program, along with documentation of the estimated time period in which it is to be addressed. An example of such a program is the Texas Voluntary Cleanup Program (section 361.501 of the Texas Health and Safety Code, as may be amended from time to time). Provide documentation upon completion of the state or federal program showing that the non-ingestion protective concentration level exceedances have been addressed to the satisfaction of the agency administering the program. <p><u>Label "Appendix V"</u></p>			√	
<p>23. The following statement certified by the applicant and any authorized representatives of the applicant(s) listed in the application:</p> <p>'I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in a manner designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the</p>	√			

possibility of a fine and imprisonment for knowing violation'. <u>Label "Appendix W"</u>				
24. A copy of the TCEQ application, if it has been filed, excluding attachments. <u>Label "Appendix X"</u>	√			
25. The signature of the applicant and proof that the applicant has the legal authority to restrict the use of the groundwater on the designated property. <u>Label "Appendix Y"</u>	√			
26. The initial filing fee of \$2,000.00 payable to "City of Houston". <u>Label "Appendix Z"</u>	√			
27. Any additional information. <u>Label "Appendix AA"</u>			√	

CITY OF HOUSTON



**PUBLIC WORKS AND
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EXECUTIVE SUMMARY

Project Overview

InControl Technologies, Inc was retained by InSite West Belt, L.P. (the property owner), to provide environmental consulting services for the West Belt Business Park (Site) located at 10651 Harwin Drive in Houston, Harris County, Texas. The subject property (Site) consists of approximately 14.6 acres of land located west-southwest of downtown Houston, Harris County, Texas. The subject property is developed with a multi-tenant commercial/ industrial complex which is currently used as a storage and distribution center. Approximately 70% of the subject property is covered with the multi tenant warehouse type buildings. Approximately 20% of the subject property is covered with concrete and brick access drives and walkways, while an estimated 10% of the subject property is covered with decorative landscaping.

Historical Environmental Condition

To date, InSite West Belt, L.P. has undertaken extensive site investigation activities designed to define the nature and extent of the environmental impact from historical releases at the Site. An Environmental Site Assessment (ESA) was performed on the Site in April 2003 by HBC/ Terracon. The ESA identified the Mercury Companies as a Recognized Environmental Condition (REC) because the tenant's operations included the use of trichloroethylene (TCE) as a cleaning solvent in the manufacturing of aluminum tubes. A subsequent site investigation performed by HBC/ Terracon in April 2003 identified the presence of a variety of chlorinated hydrocarbons in groundwater, including TCE. After the presence of the additional chlorinated compounds was discovered, additional research determined that Weed-Eater Corporation had leased the premise prior to the Mercury Companies and is the likely source of the other chlorinated solvents found in groundwater.

Subsequent investigations included the installation of permanent monitoring wells in two shallow water-bearing units (the upper transmissive zone or UTZ and the lower transmissive zone or LTZ) on the Site to delineate the extent of impact. West Belt Business Park was entered in to the TCEQ Voluntary Cleanup Program (VCP) in 2003 and was assigned VCP No. 1637. An Affected Property Assessment Report (APAR) that documented the results of the previous site investigations was submitted to the TCEQ in August 2004. InControl Technologies conducted a groundwater characterization study of the UTZ and the LTZ in February 2004. It was concluded that the UTZ groundwater qualified as a Class 3 groundwater resource while the LTZ groundwater was a Class 2 resource. The results of the groundwater classification study are detailed in the APAR. Based on these classifications, the extent of impact was

InControl Technologies, Inc.

generally confined to the Site, with some impact along the southern property boundary of the Site and the northern portion of the immediately adjacent Bennion tract. The TCEQ responded to the APAR with its comments in January 2005 requesting revisions to portions of the APAR. These revisions were submitted to the TCEQ on March 9, 2005.

A Response Action Plan (RAP) was submitted to the TCEQ in May 2005, proposing monitored natural attenuation (MNA) as the preferred remedial alternative. The TCEQ responded to the RAP in its September 21, 2005 letter, with follow-up comments in its letter of January 12, 2006. Quarterly groundwater monitoring was proposed to demonstrate that MNA was a viable alternative for the Site. All groundwater samples collected from the permanent groundwater monitoring wells were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B. The analytical results from each sampling event were compared to the TCEQ Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs).

A review of the most recent groundwater sampling data (October 2007) indicates that the only COCs that currently exceed the most conservative TRRP Tier 1 ^{GW}GW_{ing} PCLs are 1,1-DCE in the UTZ and 1,1-DCE, 1,2-DCE, TCE and VC in the LTZ. The most recent groundwater sampling data indicates that the PCL exceedence (PCLE) zone is on the subject property. The most recent soil samples collected on the subject property were also reported to contain 1,1-DCE concentrations in excess of the most conservative TRRP Tier 1 ^{GW}Soil_{ing} PCLs. This soil sample was located on the subject property near the suspected source area.

The groundwater impact in the UTZ has been horizontally delineated in all directions. Groundwater monitoring wells MW-11S, MW-12S, MW-13S are the upgradient delineation points and groundwater monitoring wells MW-2S and MW-18S are the downgradient delineation points. Several monitor wells have been installed off-site to determine if impacted groundwater has migrated off-site. UTZ monitor wells MW-11S, MW-12S, MW-13S, MW-14S, and MW-15S were installed upgradient (to the adjacent south). UTZ monitor wells MW-19S and MW-20S were installed along Sovereign Drive to delineate impacted groundwater along the western property boundary. The results of several consecutive monitoring events confirm impacted groundwater has not migrated off-site and that there is no off-site source contributing to the groundwater impacts.

The groundwater impact in the LTZ has been horizontally delineated in all directions. Groundwater monitoring wells MW-11D, MW-12D, MW-13D are the upgradient delineation points and groundwater monitoring wells MW-10D and MW-18D are the downgradient delineation points. Several monitor wells have been installed off-site to determine if impacted groundwater has migrated off-site. LTZ monitor wells MW-11D, MW-12D and MW-13D were installed upgradient (to the adjacent south). LTZ monitor well MW-18D was installed along the west property boundary with Sovereign Drive to delineate impacted groundwater along the western property boundary. The results of several consecutive monitoring events confirm impacted groundwater in the LTZ has not migrated off-site and that there is no contributing off-site source.

A comparison of the sampling results from May 2003 and October 2007 indicates that the area of impact appears to be stable to decreasing over time. COC concentrations in the source area wells (MW-1S, MW-1D, MW-4S, MW-4D, MW-8S, MW-8D, MW-7S and MW-7D) appear to be stable over the sampling history of the site. Based on the results of historical and recent groundwater sampling results, InControl Technologies does not anticipate future impact to off-site areas from the subject property.

Twelve (12) water wells were identified within a ½-mile radius of the proposed MSD boundary. Only two (2) of the twelve (12) water wells are listed as domestic wells and none are public supply wells. The two domestic wells are located approximately 1,500-feet cross-gradient from the proposed MSD boundary. Both of these wells are completed at depths greater than 200-feet bgs (240 ft and 270 ft) and are screened over the intervals 230-240 ft bgs and 260-270 ft bgs respectively. These two wells are drawing water from a zone much deeper than the impacted zones at the West Belt Business Park. The nearest public water supply well is located approximately 1-mile southwest from the proposed MSD boundary. The public water supply well is owned by the City of Houston and is screened from 660-1,070 feet bgs; a zone much deeper than the impacted zones at the West Belt Business Park. There are no sensitive receptors within 500-feet of the proposed MSD boundary. The nearest receptor is a drainage ditch located approximately ½-mile west of the proposed MSD boundary.

Item 1 – Legal Property Description

A copy of the legal description plus a metes and bounds description of the designated property is included in **Appendix A**.

Item 2 – Site Maps

The figures set out in this section provide information required under **Item 2**. The maps depict the property location and topography, the area of groundwater contamination, the location of all soil sampling points and groundwater monitoring wells, the groundwater gradient, and the soil and groundwater PCL exceedence zones.

The following is a listing of figures found in **Appendix B**.

Figure 2.1 – Site location Map

Figure 2.2a – Topographic Map

Figure 2.2b – Watershed Map

Figure 2.2c – Floodplain Map

Figure 2.3 – Groundwater PCLE zone

Figure 2.4a – Soil sampling locations

Figure 2.4b – Groundwater sampling locations

Figure 2.5a – Groundwater Gradient Map – Upper Transmissive Zone (October 2007)

Figure 2.5b – Groundwater Gradient Map – Lower Transmissive Zone (October 2007)

Figure 2.6a – Soil PCL exceedence zone map

Figure 2.6b – Groundwater PCL exceedence zone maps (1,1-DCE for the UTZ and 1,1-DCE, 1,2-DCA, TCE and VC for the LTZ)

The subject property is located within the Brays Bayou watershed (Figure 2.2b). The site is not located in the 100-year floodplain (**Figure 2.2c**).

Item 3 – Property Use

The subject property (Site) consists of approximately 14.6 acres of land located west-southwest of downtown Houston, Harris County, Texas. The affected property is located in a mixed use commercial, light industrial and residential area. The property was developed in the early 1980s with the existing complex. According to the property's ownership history obtained from the Harris County Appraisal District, InSite West Belt L.P. became the property owner in March 2005. The 14.6-acre subject property is currently developed with a multi-tenant commercial complex which is currently used as a storage and distribution center.

Approximately 90% of the subject property is covered with parking spaces, walkways and retail shops (**Figure 3.1**). The remaining 10% is covered with decorative landscaped areas. Future use of the subject property is anticipated to remain commercial and light industrial.

Figure 3.1 (found in **Appendix C**) provides a description of the surrounding land use within 500-feet of the site.

- North - The subject property is bounded to the north by the Harwin Drive right-of-way followed by commercial development.
- East - The subject property is bounded to the east by Sovereign Drive right-of-way followed by commercial development.
- South – The subject property is bounded to the south by vacant tracts of land followed by residential development.
- West – The subject property is bounded to the west by the Beltway 8 right-of-way followed by the Sam Houston Tollway and commercial development.

Item 4 – PCLE Zone Discussion

A) A review of recent groundwater sampling data (October 2007) indicates that the only COC that currently exceeds the conservative TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCLs in the UTZ is 1,1-dichloroethene (1,1-DCE). 1,1-Dichloroethene (1,1-DCE), 1,2-dichloroethane (1,2-DCA), trichloroethene (TCE) and vinyl chloride (VC) were the only COCs that currently exceed the conservative TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCLs in the LTZ. These PCL exceedences are limited to the onsite property in both the UTZ and LTZ. Monitor wells located on the vacant tract of land to the south (MW-11S, MW-11D, MW-12S, MW-12D, MW-13S and MW-13D) indicate the groundwater PCLE zone does not extend off-site to the south. These are upgradient wells which also confirm an on-site source of groundwater impacts. The area of groundwater impact is delineated in all directions (**Figure 2.3**).

The area of groundwater impact is confined to the shallow groundwater unit. Groundwater samples collected from both the upper transmissive zone (UTZ) and lower transmissive zone (LTZ) have reported COC concentrations above the TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCLs.

Based on a review of boring logs, the shallow groundwater on the subject property is first encountered at a depth of approximately 16 feet below ground surface (ft-bgs) (UTZ). The bottom of the UTZ is estimated at approximately 17 ft-bgs. A second groundwater bearing unit (LTZ) is encountered at a depth of approximately 35 ft-bgs. The bottom of the LTZ is estimated at approximately 39 ft-bgs.

A comparison of the recent groundwater sampling results (October 2007) with applicable non-ingestion protective concentration levels ($^{Air}GW_{Inh-V}$) indicates that none of the detected COC concentrations exceeded the $^{Air}GW_{Inh-V}$ PCL. Therefore, based on the recent groundwater monitoring results, there is no indication that there is a non-ingestion protective concentration level exceedence zone on the subject property.

B) The following table represents the groundwater ingestion PCL exceedences that were reported from the October 2007 monitoring event:

Table 4.1 – Groundwater ingestion PCL Exceedences

	TRRP PCL	1,1-DCE (mg/L)	1,2-DCA (mg/L)	TCE (mg/L)	VC (mg/L)
	^{GW} GW _{Ing}	0.007	0.005	0.005	0.002
	^{GW} GW _{Class 3}	0.7	0.5	0.5	0.2
	^{Air} GW _{Inh-V}	980	33	160	3.6
Monitoring Well ID	Sample Date	Concentration (mg/L)			
MW-1S	10/16/07	1.7	0.001	<0.00044	0.018
MW-1D	10/16/07	0.015	<0.00039	<0.00044	<0.00062
MW-4S	10/15/07	2.3	<0.00039	<0.00044	0.019
MW-4D	10/16/07	0.48	0.001	<0.00044	0.002
MW-7S	10/16/07	18	0.096	0.013	0.059
MW-7D	10/16/07	0.110	<0.00039	<0.00044	<0.00062
MW-8S	10/16/07	22	0.07	0.017	0.15
MW-8D	10/16/07	27	0.073	0.019	0.320 E
MW-9D	10/16/07	0.028	<0.00039	<0.00044	<0.00062

Notes – Values in **Bold** exceed the ^{GW}GW_{Ing} PCL (ingestion PCLE)

Values in **Bold Italics** exceed the ^{GW}GW_{Class 3} PCL (non-ingestion PCLE)

E – Estimated result is above calibration curve.

Groundwater COC concentrations tabulated above are less than the ^{Air}GW_{Inh-V} non-ingestion PCL, therefore there is no non-ingestion PCLE zone based on the October 2007 monitoring data.

C) The chlorinated solvents (1,1-DCE, 1,2-DCA, TCE and VC) detected in groundwater samples are associated with the historical operations in the former Mercury Company tenant space at the West Belt Business Park.

Chlorinated solvents are characterized by their high volatilities, high densities, low viscosities, low interfacial tension, low absolute solubilities, high relative solubilities, low partitioning to soil materials and low degradability. Chlorinated solvents will dissolve in water at low concentrations but once the groundwater has reached the saturation limit for that compound, the chlorinated solvent will form a separate phase in equilibrium with the water. Because chlorinated solvents have higher densities relative to water, the separate phase will “sink”. These compounds are referred to as “dense non-aqueous phase liquids” (DNAPLs). In high concentrations DNAPLs will be able to penetrate the water table and form “pools” on the top of less permeable layers. Historically, DNAPL has not been identified in any of the monitor wells within the groundwater monitor well network.

The rate of flow of a DNAPL through a geologic medium is dependent on the density and viscosity of the DNAPL, the pressure driving the DNAPL, the intrinsic permeability of the geologic medium and the degree of DNAPL saturation of the pore spaces of the medium. Dissolved phase chlorinated solvents will

move with groundwater flow. Chlorinated solvents will weakly bind to soil and rock meaning that sorption to soils will not significantly retard the movement of a chlorinated solvent.

Based on the field observations and laboratory results, it appears that the groundwater contaminants on the subject property are primarily dissolved in the shallow groundwater. Both the upper and lower transmissive zones are impacted by dissolved phase chlorinated solvents. A review of the off-site groundwater sampling results indicates that the dissolved phase COCs have not migrated off-site.

Item 5 – COCs in Designated Groundwater Discussion

- A) Refer to **Item 4** for a discussion of the contaminants of concern (COC) in the ingestion protective concentration level (PCL) exceedence zone. Current groundwater sampling results indicate that there are four identified COCs (1,1-DCE, 1,2-DCA, TCE and VC) that exceed the ingestion protective concentration levels on the subject property. In the UTZ only one COC (1,1-DCE) exceeds the ingestion PCL ($^{GW}GW_{Class3}$) on the subject property. In the LTZ all four identified COCs exceeded the ingestion PCL ($^{GW}GW_{Ing}$) on the subject property. The groundwater samples collected from monitoring wells on the property to the adjacent south of the subject property reported COCs at concentrations much lower than the ingestion PCLs.
- B) Refer to **Table 4.1** for a tabulated comparison of COC concentrations with the respective TRRP Protective Concentration Levels (PCLs)
- C) Refer to **Item 4** for a discussion of the basic geochemical properties of the contaminants of concern (COCs) in the ingestion PCL exceedence zone.

Item 6 – Summary of Soil and Groundwater Concentration Data

Appendix F contains tables summarizing the concentration levels for the primary chemicals of concern in soil and groundwater. The tables include the concentration level, the ingestion protective concentration limits ($^{GW}Soil_{Ing}$ for soil, $^{GW}GW_{Class3}$ for groundwater in the UTZ and $^{GW}GW_{Ing}$ for groundwater in the LTZ), the non-ingestion protective concentration limits for soil ($^{Tot}Soil_{Comb}$ and $^{Air}Soil_{Inh-V}$) and groundwater ($^{Air}GW_{Inh-V}$), the critical protective concentration limits assuming no MSD is in place ($^{GW}Soil_{Ing}$ for soil, $^{GW}GW_{Class3}$ for groundwater in the UTZ and $^{GW}GW_{Ing}$ for groundwater in the LTZ), and the critical PCLs assuming that an MSD is in place ($^{Tot}Soil_{Comb}$ for soil and $^{Air}GW_{Inh-V}$ for groundwater).

Item 7 – Plume Stability

The West Belt Business Park (Site) has been affected by dissolved phase contaminants (one or more of 1,1-DCE, 1,2-DCA, TCE and VC) in the soil and groundwater. These contaminants are believed to be associated with the historic operations conducted in the former Mercury Companies tenant space.

Upper Transmissive Zone (UTZ) – The groundwater impact in the UTZ has been horizontally delineated in all directions. Groundwater monitoring wells MW-11S, MW-12S, MW-13S are the upgradient delineation points and groundwater monitoring wells MW-2S and MW-18S are the downgradient delineation points. Several monitor wells have been installed off-site to determine if impacted groundwater has migrated off-site. UTZ monitor wells MW-11S, MW-12S, MW-13S, MW-14S, and MW-15S were installed upgradient (to the adjacent south). UTZ monitor wells MW-19S and MW-20S were installed along Sovereign Drive to delineate impacted groundwater along the western property boundary. The results of several consecutive monitoring events confirm impacted groundwater has not migrated off-site and that there is no off-site source contributing to the groundwater impacts.

Lower Transmissive Zone (LTZ) – The groundwater impact in the LTZ has been horizontally delineated in all directions. Groundwater monitoring wells MW-11D, MW-12D, MW-13D are the upgradient delineation points and groundwater monitoring wells MW-10D and MW-18D are the downgradient delineation points. Several monitor wells have been installed off-site to determine if impacted groundwater has migrated off-site. LTZ monitor wells MW-11D, MW-12D and MW-13D were installed upgradient (to the adjacent south). LTZ monitor well MW-18D was installed along the west property boundary with Sovereign Drive to delineate impacted groundwater along the western property boundary. The results of several consecutive monitoring events confirm impacted groundwater in the LTZ has not migrated off-site and that there is no contributing off-site source.

A comparison of the sampling results from May 2003 and October 2007 indicates that the area of impact appears to be stable to decreasing over time. COC concentrations in the source area wells (MW-1S, MW-1D, MW-4S, MW-4D, MW-8S, MW-8D, MW-7S and MW-7D) appear to be stable over the sampling history of the site. Based on the results of historical and recent groundwater sampling results, InControl Technologies does not anticipate future impact to off-site areas from the subject property.

Item 8 – Contamination Exceedence Discussion (without MSD)

On the Designated Property

As described in **Item 4**, 1,1-DCE, 1,2-DCA, TCE and VC were reported at concentrations that exceeded the TRRP residential assessment levels without a municipal setting designation. Groundwater samples collected from UTZ on-site monitoring wells MW-1S, MW-4S, MW-7S and MW-8S reported 1,1-DCE at concentrations greater than the TRRP residential ingestion exceedence level without a municipal setting designation (^{GW}GW_{Class3}). Groundwater samples collected from LTZ on-site monitoring wells MW-1D, MW-4D, MW-7D, MW-8D and MW-9D reported 1,1-DCE, 1,2-DCA, TCE and/or VC at concentrations greater than the TRRP residential ingestion exceedence level without a municipal setting designation.

(^{GW}GW_{ing}). A review of the most recent groundwater sampling data (October 2007) confirms these findings.

Off the Designated Property

Three groundwater monitoring well pairs (MW-11S, MW-11D, MW-12S, MW-12D, MW-13S and MW-13D) were installed on the vacant lot south of the subject property to assess groundwater impacts to both the UTZ and LTZ. Two monitoring wells (MW-14S and MW-15S) were installed on the adjacent General Solutions property to assess impacts to the UTZ. Monitoring wells MW-19S and MW-20S were installed along the west side of Sovereign Drive to investigate any off-site migration of the dissolved phase COCs. Groundwater sampling results from all off-site wells confirm groundwater impacted by chlorinated solvents from the former Mercury Companies source area have not extended beyond the subject property boundary. A review of the most recent groundwater sampling data (October 2007) confirms these findings.

Item 9 – Future Contamination Exceedence Discussion (with MSD)

Recent groundwater monitoring on the subject property indicates that the area of groundwater impact has been horizontally delineated. Groundwater samples collected from UTZ and LTZ monitoring wells reported COC concentrations less than the TRRP residential ingestion exceedence level with a municipal setting designation (^{Air}GW_{inh-v}). Therefore, there is no future contamination exceedence anticipated with a municipal designation for the subject property.

Item 10 – Origin of Contamination

The Mercury Companies began operations in the mid 1980's in Suite 700 of the West Belt Business Park. The facility was involved in sheet metal fabrication, electronics and metal tube manufacturing. The most likely source of chlorinated solvents in soil and shallow groundwater is through the historic use of TCE as a solvent for washing/ degreasing parts. Prior to The Mercury Companies occupation of Suite 700, the Weed Eater Corporation was the listed tenant. It is possible that the Weed Eater Corporation was the source of the other VOCs (1,1-DCE, 1,2-DCA) identified in shallow groundwater at the Site. TCE and/or its breakdown products (primarily 1,1-DCE) have been identified in soil and groundwater. Surrounding properties are primarily commercial/ light industrial but, at this time, are not believed to have contributed to on-site contamination and are unrelated to the 1,1-DCE contamination.

Item 11 – Regulatory Actions

Not Applicable. No regulatory actions have been taken in the last five years.

Item 12 – Existing State or EPA registrations, permits or identifications

Texas State Customer Number – CN600279632 (The Mercury Companies)
Texas State Registration Number – RN100569029 (The Mercury Companies)

InControl Technologies, Inc.

The following registration number is inactive:
Solid Waste Registration Number – 39679 (The Mercury Companies)

Item 13 – VCP Enrollment

In 2003, InSite West Belt, L.P. submitted a Voluntary Cleanup Program (VCP) Application and Agreement to the Texas Commission on Environmental Quality (TCEQ). West Belt Business Park was assigned VCP No. 1637.

Item 14 – TCEQ Submittals

The following is a list of submittals by InControl Technologies:

- *Innocent Owner Program Site Investigation Report*, dated December 3, 2003
- *Affected Property Assessment Report*, dated August 17, 2004
- *April 2005 Groundwater Monitoring Report*, dated September 6, 2005
- *July 2005 Groundwater Monitoring Report*, dated October 6, 2005
- *Groundwater Monitoring Report, 4th Quarter 2005, 1st and 2nd Quarters 2006*, dated August 9, 2006
- *Groundwater Monitoring Report for 3rd and 4th Quarters 2006*, dated January 2007
- *Groundwater Monitoring Report for 1st and 2nd Quarters 2007*, dated May 31, 2007
- *Groundwater Monitoring Report for 3rd Quarter 2007*, dated October 17, 2007

Item 15 – Public Drinking Water Supply

Drinking water for the subject property is provided by the City of Houston. A review of the City of Houston 2006 Drinking Water Quality Report indicates that, "Houston drinking water met or exceeded all Federal and State standards for safe drinking water." Therefore, the City of Houston water supply system satisfies the requirements of Chapter 341 of the Texas Health and Safety Code.

The City of Houston 2006 Drinking Water Quality Report and the online City of Houston GIMS database indicated that the City of Houston water supply system appeared to be capable of supplying drinking water to the surrounding properties within a ½-mile radius of the subject property.

Item 16 – Private Water Well Owners within Five Miles of Subject Property

Refer to **Appendix P** for the names and address of identified water well owners and notifications. Notifications will be sent to 600 private water well owners (not including wells owned/operated by a public utility or municipality).

Item 17 – Retail Public Utility Operating Groundwater Supply Well within Five Miles of Subject Property

The following retail public utilities operate at least one groundwater supply well within five miles of the subject property:

- City of Houston Public Works Department,
- City of Bunker Hill Village,
- Bissonnet MUD,
- Memorial Villages Water Authority,
- City of Bellaire
- West Harris County MUD 6,
- City of Meadows Place,
- Old Richmond Farm,
- Beechnut MUD,
- Mission Bend MUD 2
- Renn Road MUD, and
- Westhollow Technology Center.

The above mentioned entities have been provided notice as required by section 361.805 of the Texas Health and Safety Code.

Refer to **Appendix Q** for the Water Utility Database Report and notifications.

Item 18– Municipalities within One Half Mile of Subject Property

Not Applicable. There are no other municipalities within ½- mile of the subject site. Therefore, no notice has been provided.

Item 19 – Municipalities Operating Groundwater Supply Well within Five Miles of Subject Property

The following municipalities operate at least one groundwater supply well within five miles of the subject property:

- City of Houston,
- City of Bellaire,

- City of Bunker Hill Village, and
- City of Meadows Place.

The above mentioned have been provided notice as required by section 361.805 of the Texas Health and Safety Code.

Refer to **Appendix Q** for the Water Utility Database Report and notifications.

Item 20 – Real Property owners within 2,500 feet of Designated Property Boundary

Refer to **Appendix T** for a listing of real property owners within 2,500 feet of designated property boundary. Copies of mailing labels have also been included in **Appendix T**.

Item 21 – Statement Regarding Completeness of Information and Potential for Off-Site Impact

To the best of my knowledge and belief, based upon a review of all public and private records and other information sources available to me in the exercise of due diligence, the opinions stated and conclusions made in this application are supported by such information, and the technical and scientific information submitted with the application is true, accurate, and complete. Based on such review, the contaminants of concern from the sources on the designated property more likely than not do not exceed a non-ingestion protective concentration level on property beyond the boundaries of the designated property.

Michael F. Marcon, P.G.
President, Principal
InControl Technologies, Inc.

Signature: _____

Item 22 – Determination of off-site source

Not Applicable. The contaminants of concern from sources on the designated property do not exceed a non-ingestion protective concentration level beyond the boundary of the designated property.

InControl Technologies, Inc.

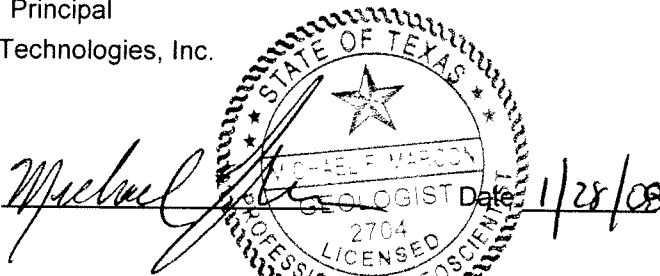
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Item 23 – Statement Regarding Accuracy of Information

I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in a manner designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Michael F. Marcon, P.G.
President, Principal
InControl Technologies, Inc.

Signature:

The seal is circular with a five-pointed star in the center. The text around the star reads "STATE OF TEXAS" at the top and "PROFESSIONAL GEOLOGIST" at the bottom. Inside the seal, the name "MICHAEL F. MARCON" is written, followed by "2704" and "LICENSED". To the right of the seal, the date "1/28/08" is handwritten.

Item 24 – MSD Application submitted to TCEQ

A copy of the MSD application that was submitted to the TCEQ will be included as **Appendix X** once the City of Houston MSD application has been approved.

Item 25 – Signed Restrictive Covenant

The signed and notarized restrictive covenant on groundwater use at the site is pending approval of the MSD from the City of Houston. Once the MSD application is approved, a copy of the signed and notarized restrictive covenant will be included as **Appendix Y**.

Item 26 – Filing Fee

The initial filing fee of \$2,000 is attached.

InControl Technologies, Inc.

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